

### ABSTRACT OF THE DISCLOSURE

A system may include a decoder, an encoder, and a storage device. The decoder may decode encoded video information having a first format into intermediate video information. The decoder may also extract motion vectors from the encoded video information. The encoder may encode the intermediate video information into output video information having a second format. The encoder may use the motion vectors extracted from the encoded video information to perform its encoding. The storage device may store the output video information from the encoder.